

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An optical receiver comprising:
a dispersion compensator having variable dispersion compensation to compensate chromatic dispersion of a signal light input from an optical transmission line;
~~a self-correlator~~an autocorrelator to ~~self-correlate~~ autocorrelate a signal light output from the dispersion compensator and output a control signal; and
a controller to input the control signal output by the autocorrelator and control the dispersion compensator to increase the ~~self-correlation~~ autocorrelation of the optical ~~self-correlator~~ autocorrelator.
2. (Previously Presented) The optical receiver of claim 1 further comprising a transmission error rate information calculator to calculate information indicating a transmission error rate of the optical transmission line out of a signal light output from the dispersion compensator, wherein the controller controls the dispersion compensator to decrease the transmission error rate.
3. (Currently Amended) The optical receiver of claim 2 wherein the controller controls the dispersion compensator to increase the ~~self-correlation~~ autocorrelation of the optical ~~self-correlator~~ autocorrelator and then controls the dispersion compensator to decrease the transmission error rate according to an output from the transmission error rate information calculator.
4. (Currently Amended) The optical receiver of claim 2 wherein the dispersion compensator comprises a dispersion/dispersion slope compensator having variable amount of

dispersion compensation and variable dispersion slope; and wherein the controller controls the amount of dispersion compensation of the dispersion/dispersion slope compensator so that the ~~selfcorrelation~~ autocorrelation of the optical ~~selfcorrelator-autocorrelator~~ becomes larger, and controls the dispersion slope of the dispersion/dispersion slope compensator so that the transmission error rate becomes smaller.

5. (Currently Amended) An optical receiver comprising:

an optical divider to divide a signal light from an optical transmission line into two portions;

a first and a second dispersion compensators, each dispersion compensator having variable dispersion compensation to compensate chromatic dispersions of each of the two portions of signal light output from the optical divider;

a data demodulator to demodulate a data carried by a signal light output from the first dispersion compensator;

an optical ~~selfcorrelator-autocorrelator~~ to operate ~~selfcorrelation~~ of a signal light output from the second dispersion compensator; and

a controller to control the second dispersion compensator to increase ~~selfcorrelation~~ of the optical ~~selfcorrelation~~ and to control the first dispersion compensator according to result of controlling the second dispersion compensator.

6. (Previously Presented) The optical receiver of claim 5 wherein the data demodulator comprises a transmission error rate information calculator to calculate information indicating a transmission error rate of the optical transmission line; and wherein the controller controls the first dispersion compensator to decrease the transmission error rate according to an output from the transmission error rate information calculator.

7. (Previously Presented) The optical receiver of claim 6 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable

dispersion compensation and variable dispersion slope; and wherein the controller controls the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.

8. (Currently Amended) An optical receiver comprising:

a first optical divider to divide a signal light input from an optical transmission line into two portions;

a first and a second dispersion compensator, each dispersion compensator having variable dispersion compensation to compensate chromatic dispersion of each portion of signal light output from the first optical divider;

a second optical divider to divide an output light from the first dispersion compensator into two portions;

a data demodulator to demodulate a data carried by one portion of signal light output from the second optical divider;

an optical ~~selfcorrelator~~ autocorrelator;

an optical selector to select an output light from the second dispersion compensator, or the other portion of output light from the second optical divider and to supply the selected output light to the optical ~~selfcorrelator~~ autocorrelator; and

a controller to control the second dispersion compensator to increase ~~selfcorrelation~~ autocorrelation of the optical ~~selfcorrelator~~ autocorrelator on condition that the optical selector is controlled to supply the output signal light from the second dispersion compensator to the optical ~~selfcorrelator~~ autocorrelator, and to control the first dispersion compensator according to result of the control of the second dispersion compensator.

9. (Currently Amended) The optical receiver of claim 8 wherein the controller controls the first dispersion compensator to increase ~~selfcorrelation~~ autocorrelation of the optical ~~selfcorrelator~~ autocorrelator on condition that the optical selector is controlled to supply an

output signal light from the first dispersion compensator to the optical—~~selfcorrelator~~
autocorrelator.

10. (Previously Presented) The optical receiver of claim 8 wherein
the data demodulator comprises a transmission error rate information calculator to
calculate information indicating a transmission error rate of the optical transmission line; and
the controller controls the first dispersion compensator to decrease the transmission
error rate according to an output from the transmission error rate information calculator.

11. (Previously Presented) The optical receiver of claim 10 wherein
the first dispersion compensator comprises a dispersion/dispersion slope compensator
having variable dispersion compensation and variable dispersion slope; and
the controller controls the dispersion/dispersion slope compensator to decrease the
transmission error rate.

12. (Currently Amended) A method for controlling a dispersion compensator to
compensate chromatic dispersion of a signal light input from an optical transmission line, the
method comprising:

~~operating selfcorrelation of~~ autocorrelating an output signal light from the dispersion
compensator;

generating a control signal from autocorrelating the output signal light; and
controlling the dispersion compensator by the control signal to increase the
~~selfcorrelation~~ autocorrelation.

13. (Currently Amended) The method of claim 12 further comprising calculating
information indicating a transmission error rate of the optical transmission line out of the output
signal light from the dispersion compensator, wherein the controlling controls the dispersion

compensator to increase the ~~self-correlation~~ autocorrelation and to decrease the transmission error rate.

14. (Currently Amended) The method of claim 13 further comprising: after the controlling controls the dispersion compensator to increase the ~~self-correlation~~ autocorrelation, controlling the dispersion compensator to decrease the transmission error rate.

15. (Currently Amended) The method of claim 13 wherein the dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and

the controlling controls dispersion compensation of the dispersion/dispersion slope compensator to increase the ~~self-correlation~~ autocorrelation and controls the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.

16. (Currently Amended) A method for controlling a first dispersion compensator to compensate chromatic dispersion of a signal light input from an optical transmission line, the method comprising:

providing a second dispersion compensator having variable dispersion compensation to compensate chromatic dispersion of a signal light input from the optical transmission line;

operating ~~self-correlation~~ autocorrelation of a signal light output from the second dispersion compensator;

controlling the second dispersion compensator to increase the ~~self-correlation~~ autocorrelation; and

controlling the first dispersion compensator according to result from said controlling the second dispersion compensator.

17. (Previously Presented) The method of claim 16 further comprising calculating information indicating a transmission error rate of the optical transmission line out of a signal light output from the first dispersion compensator wherein

the controlling further comprises controlling the first dispersion compensator to decrease transmission error rate.

18. (Previously Presented) The method of claim 17 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and

the controlling controls the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.

19. - 20. (Canceled).

21. (Currently Amended) The method of claim ~~[[19]]~~ 16 further comprising operating ~~selfcorrelation~~ autocorrelation of an output signal light from the first dispersion compensator after the setting and controlling the first dispersion compensator to increase the ~~selfcorrelation~~ autocorrelation.

22. (Currently Amended) The method of claim ~~[[20]]~~ 16 wherein the first dispersion compensator comprises a dispersion/dispersion slope compensator having variable dispersion compensation and variable dispersion slope; and the controlling comprises controlling the dispersion slope of the dispersion/dispersion slope compensator to decrease the transmission error rate.